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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/706,995	11/14/2003	Hsin-Mao Hsieh	BHT-3183-60	7365

7590 06/05/2006

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SUITE 1404
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EXAMINER	
WILLOUGHBY, TERRENCE RONIQUE	
ART UNIT	PAPER NUMBER
2836	

DATE MAILED: 06/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

H·A

Office Action Summary	Application No.	Applicant(s)	
	10/706,995	HSIEH, HSIN-MAO	
	Examiner	Art Unit	
	Terrence R. Willoughby	2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☐ Responsive to communication(s) filed on _____.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) 1-9 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) 1-9 is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____.
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: On page 5, line 3, presently read as "discharge panel 18" and on line 6, presently read as "discharge card 18", which the examiner suggests it should be rewritten to be consistent according to the drawings.

Appropriate correction is required.

The disclosure recites on page 1, lines 23-27 and page 2 lines 1-3, the phrase "to effectively eliminate the high frequency that is created by the oscillation circuit to endanger human body". It is unclear and misunderstood how high frequency created in the oscillation circuit will endanger the human body?

Claim Objections

2. Claim 1 is objected to as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

In claim 1, line 12, the phrase "a radial frequency eliminating circuit" is indefinite as it is unclear what is meant by a radial frequency?

In claim 1, line 13, the phrase " capacitance (C4) being connected with the coil (L2) in parallel" is indefinite for the capacitance (C4) is connected in series with the coil (L2).

3. Claim 4 is objected to because of the following informalities: On page 8, line 2, the word "collected" should be rewritten has "connected".

Appropriate correction is required.

4. Claim 6 is objected to because of the following informalities: It is unclear what is meant by " a shelter inside the shelter" on page 9, lines 1.

Appropriate correction is required.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

6. Claims 1,3,6,8,9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joannou (US 6,919,053) in view of Manjo et al (US 5,263,197) and further in view of Owen et al. (US 5,065,272).

Regarding claim 1, Joannou (Fig. 2) discloses the claimed said circuit for generating negative ions comprising: an oscillation circuit including a transformer (3) and an oscillation loop, the transformer being configured to generate a high voltage to produce a resonant frequency through the oscillation loop, the oscillation loop having a transistor, the transistor having a base, a collector and an emitter, the base and the collector of the transistor being electrically connected to the transformer (col. 3, ll. 60-67-col. 4, ll. 1-4); an amplifying circuit (col. 3, ll. 36-45)connected with at least a discharge electrode (5), the amplifying circuit configured to rectify current flowing to the oscillation circuit and discharge negative ions through the discharge electrode. Joannou does not disclose a radial frequency eliminating circuit having a capacitance (C4) and a coil (L2), the

capacitance (C4) being connected with the coil (L2) in parallel, the coil (L2) being connected to the emitter of the transistor in series, and the capacitance (C4) being electrically connected to the base of the transistor.

However, Manjo et al. (Fig. 2, 14) discloses an oscillator circuit having a capacitance (33) and a coil (32), the capacitance being connected with the coil in parallel, the coil being connected to the emitter of the transistor (30) in series, and the capacitance being electrically connected to the base of the transistor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the oscillation circuit of Joannou to attenuate higher order frequencies providing satisfactory frequency stability.

Manjo et al. and Joannou does not disclose a power indication circuit for displaying power on/off.

However, Owen et al. discloses (Fig. 6, 24) a power indication circuit displaying power on/off. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a power indication circuit taught by Owen et al. to the negative ion generating circuit of Manjo et al. and Joannou to provide an indication to the user when the ionizer is powered on and off.

Regarding claim 3, Joannou in view of Manjo et al. and further in view of Owen et al. discloses the claimed said circuit accordance with claim 1, wherein the oscillation circuit (Manjo et al., Fig. 2,14) has a capacitance (Manjo et al. (34)) connected to the base of the transistor (Manjo et al. (30)) and the transformer (Joannou, Fig. 2, 3).

Regarding claim 6, Joannou (Fig. 2) discloses the claimed said negative ion generator comprising: an oscillation circuit including a transformer (3) and an oscillation loop, the transformer being configured to generate a high voltage to produce a resonant frequency through the oscillation loop, the oscillation loop having a transistor, the transistor having a base, a collector and an emitter, the base and the collector of the transistor being electrically connected to the transformer (col. 3, ll. 60-67-col. 4, ll. 1-4); an amplifying circuit (col. 3, ll. 36-45)connected with at least a discharge electrode (5), the amplifying circuit configured to rectify current flowing to the oscillation circuit and discharge negative ions through the discharge electrode, a housing (9); and a shelter (9) for wrapping the transformer, the transistor and a coil (20). Joannou does not disclose a radial frequency eliminating circuit having a capacitance (C4) and a coil (L2), the capacitance (C4) being connected with the coil (L2) in parallel, the coil (L2) being connected to the emitter of the transistor in series, and the capacitance (C4) being electrically connected to the base of the transistor.

However, Manjo et al. (Fig. 2, 14) discloses an oscillator circuit having a capacitance (33) and a coil (32), the capacitance being connected with the coil in parallel, the coil being connected to the emitter of the transistor (30) in series, and the capacitance being electrically connected to the base of the transistor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the oscillation circuit of Joannou to attenuate higher order frequencies providing satisfactory frequency stability.

Manjo et al. and Joannou does not disclose a power indication circuit for displaying power on/off.

However, Owen et al. discloses (Fig. 6, 24) a power indication circuit displaying power on/off. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a power indication circuit taught by Owen et al. to the negative ion generating circuit of Manjo et al. and Joannou to provide an indication to the user when the ionizer is powered on and off.

Regarding claim 8, Joannou in view of Manjo et al. and further in view of Owen et al. discloses the claimed said circuit accordance with claim 6, wherein the oscillation circuit (Manjo et al., Fig. 2,14) has a capacitance (Manjo et al. (34)) connected to the base of the transistor (Manjo et al. (30)) and the transformer (Joannou, Fig. 2, 3).

Regarding claim 9, Joannou in view of Manjo et al. and further in view of Owen et al. discloses the claimed said circuit accordance with claim 6, wherein the shelter is made of metal (col. 4, ll. 11-13).

7. Claims 2,4,5, and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Joannou (US 6,919,053) and Manjo et al (US 5,263,197) in view of Owen et al. (US 5,065,272) and further in view of Terashita et al. (US 6,515,879).

Regarding claims 5 and 7, Joannou and Manjo et al. in view of Owen et al. discloses the claimed said circuit accordance with claims 1 and 6, however none of the references mentioned discloses the radial frequency filtering circuit connecting the power indication circuit with the oscillation circuit, the radial

frequency filtering circuit having a first capacitance (C1), a second capacitance (C2) and a coil (L1).

However, Terashita et al. (Fig. 1) discloses a power source filtering circuit connected to the power source having a first capacitance (3), a second capacitance (4) and a coil (1). It would have bee obvious to one of ordinary skill in the art at the time the invention was made to have modified the filtering circuit of Joannou mentioned combination to eliminate various noises supplied by the direct current power source.

Regarding claim 4, Joannou (Fig. 2) discloses the claimed said circuit for generating negative ions comprising: an oscillation circuit including a transformer (3) and an oscillation loop, the transformer being configured to generate a high voltage to produce a resonant frequency through the oscillation loop, the oscillation loop having a transistor, the transistor having a base, a collector and an emitter, the base and the collector of the transistor being electrically connected to the transformer (col. 3, ll. 60-67-col. 4, ll. 1-4); an amplifying circuit (col. 3, ll. 36-45)connected with at least a discharge electrode (5), the amplifying circuit configured to rectify current flowing to the oscillation circuit and discharge negative ions through the discharge electrode. Joannou does not disclose a radial frequency eliminating circuit having a capacitance (C4) and a coil (L2), the capacitance (C4) being connected with the coil (L2) in parallel, the coil (L2) being connected to the emitter of the transistor in series, and the capacitance (C4) being electrically connected to the base of the transistor.

However, Manjo et al. (Fig. 2, 14) discloses an oscillator circuit having a capacitance (33) and a coil (32), the capacitance being connected with the coil in parallel, the coil being connected to the emitter of the transistor (30) in series, and the capacitance being electrically connected to the base of the transistor. It would have been obvious to one of ordinary skill in the art at the time the invention was made to have modified the oscillation circuit of Joannou to attenuate higher order frequencies providing satisfactory frequency stability.

Manjo et al. and Joannou does not disclose a power indication circuit for displaying power on/off.

However, Owen et al. discloses (Fig. 6, 24) a power indication circuit displaying power on/off. It would have been obvious to one of ordinary skill in the art at the time the invention was made to provide a power indication circuit taught by Owen et al. to the negative ion generating circuit of Joannou and Manjo et al. to provide an indication to the user when the ionizer is powered on and off.

None of the references mentioned above discloses the claimed said radial frequency filtering circuit connecting the power indication circuit with the oscillation circuit, the radial frequency filtering circuit having a first capacitance (C1), a second capacitance (C2) and a coil (L1).

However, Terashita et al. (Fig. 1) discloses a power source filtering circuit connected to the power source having a first capacitance (3), a second capacitance (4) and a coil (1). It would have bee obvious to one of ordinary skill in the art at the time the invention was made to have modified the filtering circuit

of Joannou et al. mentioned combination to eliminate various noises supplied by the direct current power source.

Regarding claim 5, Joannou in view of Manjo et al. and further in view of Owen et al. discloses the claimed said circuit accordance with claim 4, wherein the oscillation circuit (Manjo et al, Fig. 2,14) has a capacitance (Manjo et al., (34)) connected to the base of the transistor (Manjo et al. (30)) and the transformer (Joannou, Fig. 2, 3).

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. Weinberg (US 6,042,637) discloses electronic air purification, and a miniature device that generates a corona discharge to detoxify, and circulate air around an individual face. Hisaya et al. (JP 02004311158) discloses a negative ion generator driven by a direct-current power source of lower power consumption.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Terrence R. Willoughby whose telephone number is 571-272-2725. The examiner can normally be reached on 8-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x 36 . The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

TRW
5/26/06

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